

### Abstract of the Disclosure

In accordance with a parallel matrix processing method adopted in a shared-memory scalar computer, a matrix to be subjected to LU factorization is divided into a block D of the diagonal portion and blocks beneath the D diagonal block such as L1, L2 and L3. Then,  $D + L1$ ,  $D + L2$  and  $D + L3$  are assigned to 3 processors respectively for processing them in parallel. Next, a block U is updated by adopting an LU-factorization method and C1 to C3 are updated with L1 to L3 and U. By carrying out this processing on the inner side gradually decreasing in size as blocks, finally, a portion corresponding to the D diagonal block remains to be processed. By applying the LU factorization to this D portion, the LU factorization for the entire matrix can be completed.